



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/083,273	02/23/2002	Michael C. Park	EWG-161 US	7752
758	7590	12/14/2004	EXAMINER	
FENWICK & WEST LLP SILICON VALLEY CENTER 801 CALIFORNIA STREET MOUNTAIN VIEW, CA 94041			PERUNGAVOOR, SATHYANARAYA V	
			ART UNIT	PAPER NUMBER
			2625	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/083,273

Applicant(s)

PARK ET AL.

Examiner

Sath Perungavoor

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 02/23/2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Specification***

1. 35 U.S.C. 112, first paragraph, requires the specification to be written in "full, clear, concise, and exact terms." The specification is replete with terms which are not clear, concise and exact. The specification should be revised carefully in order to comply with 35 U.S.C. 112, first paragraph. Examples of some unclear, inexact or verbose terms used in the specification are: "fist pixel" (Page 4 Line 2), "Figure 1" (Page 9 Line 6) and "406" (Page 10 Line 10).

### ***Claim Objections***

2. Claim 12 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claim 12 is dependent on claim 12.

Examiner assumed claim 12 to be dependent on claim 7 for examination purposes.

3. Claim 13 objected to because of the following informalities: "\ " at the end of the claim must be removed. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claims 1-14 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claim 1, the generation of the modified image (Page 12 Line 4) should be discussed in further detail. The specification and claims lack the information regarding the steps involved in the generation of modified image from environmental characteristics. Specification discloses vectors, but does not disclose how these vectors are derived from the environmental characteristics.

Similarly, claims 2-6 are being rejected as being dependent on claim 1.

Regarding claim 7, the generation of the modified image (Page 12 Line 31) should be discussed in further detail. The specification and claims lack the information regarding the steps involved in the generation of modified image.

Similarly, claims 8-12 are being rejected as being dependent on claim 7.

Art Unit: 2625

Regarding claim 13, the generation of the modified display (Page 13 Line 29) should be discussed in further detail. The specification and claims lack the information regarding the steps involved in the generation of modified display from environmental characteristics. Specification discloses vectors, but does not disclose how these vectors are derived from the environmental characteristics.

Similarly, claim 14 is being rejected as being dependent on claim 13.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 1-14 rejected under 35 U.S.C. 102(b) as being anticipated by Profeta (US 5,822,713).

Regarding claim 1, Profeta discloses the a system for aiming a weapon which comprises a camera for capturing an acquired image of a theater of operations, a computer for modifying the pixels in said image to generate a predictively modified image that takes into account for environmental factors, and a display for displaying said predictively modified image (Col. 3 Lines 48-49, 53-58 and 63-67; Col. 5 Lines 30-46 and 62-64; Cited reference discloses an infrared camera and display for displaying

modified images. Images are adaptively generated incorporating environmental and weapon characteristics.).

Regarding claim 2, Profeta discloses the system recited in claim 1 wherein said camera acquires a panoramic image (Col. 6 Lines 45-46; Wide field of view is achieved through panoramas.).

Regarding claim 3, Profeta discloses the system recited in claim 1 wherein said computer generates a predictively modified image that designates the targets within range of said weapon (Col. 5 Lines 30-46; Cited reference discloses adaptively modified incorporating the target range.).

Regarding claim 4, Profeta discloses the system recited claim 1 wherein said weapon is adapted to emit a projectile and wherein said computer generates a predictively modified image that takes into account the flight characteristics of said projectile (Col. 5 Lines 30-46; Cited reference discloses adaptively modified incorporating the ballistic characteristics.).

Regarding claim 5, Profeta discloses the system recited in claim 1 wherein said acquired image includes a plurality of pixels and wherein a set of vectors are applied to said pixels to generate a predictively modified images, said vectors representing various factors that affect aiming said weapon (Col. 5 Lines 30-46; Cited reference discloses

adaptively modified incorporating environmental and weapon characteristics. It would be inherent that these characteristics be represented as vectors.).

Regarding claim 6, Profeta discloses the system recited in claim 1 wherein said acquired image includes a plurality of pixels and wherein said pixels are moved to generate said predictively modified image, the amount of movement of each pixel being dependent upon environmental factors and the characteristics of said weapon (Col. 5 Lines 30-46; Cited reference discloses adaptively modified incorporating environmental and weapon characteristics.).

Regarding claim 7, Profeta discloses a system for providing guidance concerning the impact area of projectiles that leave a moving platform (Fig. 8a and 8b; The projectiles are fired by the moving soldier.),

a camera for acquiring an acquired image of a target area (Col. 3 Lines 48-49; Cited reference discloses an infrared camera.),

a computer for modifying the pixels of said image of said target area to generate (56 on Fig. 3a)

a modified image that represents the future impact area of said projectile (Col. 3 Lines 53-58; Col. 5 Lines 62-64; Cited reference discloses a modified image of target area generated by incorporating environmental and weapons characteristics.),

a display for displaying said modified image (Col. 5 Lines 62-64).

Regarding claim 8, Profeta discloses the system recited in claim 7 wherein said camera acquires a panoramic image (Col. 6 Lines 45-46; Wide field of view is achieved through panoramas.).

Regarding claim 9, Profeta discloses the system recited in claim 7 wherein said computer generates a predictively modified image that designates the targets within range of said weapon (Col. 5 Lines 30-46; Cited reference discloses adaptively modified incorporating the target range.).

Regarding claim 10, Profeta discloses the system recited claim 7 wherein said weapon is adapted to emit a projectile and wherein said computer generates a predictively modified image that takes into account the flight characteristics of said projectile (Col. 5 Lines 30-46; Cited reference discloses adaptively modified incorporating the ballistic characteristics.).

Regarding claim 11, Profeta discloses the system recited in claim 7 wherein said acquired image includes a plurality of pixels and wherein a set of vectors are applied to said pixels to generate a predictively modified images, said vectors representing various factors that affect aiming said weapon (Col. 5 Lines 30-46; Cited reference discloses adaptively modified incorporating environmental and weapon characteristics. It would be inherent that these characteristics be represented as vectors.).



Regarding claim 12, Profeta discloses the system recited in claim 7 wherein said acquired image includes a plurality of pixels and wherein said pixels are moved to generate said predictively modified image, the amount of movement of each pixel being dependent upon environmental factors and the characteristics of said weapon (Col. 5 Lines 30-46; Cited reference discloses adaptively modified incorporating environmental and weapon characteristics.).

Regarding claim 13, Profeta discloses a method of generating a predictively modified image from an acquired images (Fig. 3a), said method comprising the steps of capturing an acquired image of a theater of operations (Col. 3 Lines 48-49; Cited reference discloses an infrared camera.),

moving the pixels in said acquired image in accordance with a set of vectors which represent environmental factors (Col. 5 Lines 30-46; Cited reference discloses adaptively modified incorporating environmental and weapon characteristics.),

whereby the image represented by said moved pixels represents said predictively modified display (Col. 5 Lines 62-64).

Regarding claim 14, Profeta discloses the method in claim 13 wherein said predictively modified image is generated by stretching or compressing said acquired image in directions dictated by environmental factors (Col. 6 Line 45-48; Narrow field of view would stretch the image and wide field of view would compress the image).


Art Unit: 2625

**Contact Information**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sath Perungavoor whose telephone number is (703) 306-4116. The examiner can normally be reached on Monday to Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta whose telephone number is (703) 308-5246, can be reached on Monday to Friday from 9:00am to 5:00pm. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Sath Perungavoor  
Art Unit 2625  
December 9, 2004

  
**KANJIBHAI PATEL**  
**PRIMARY EXAMINER**